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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,042	07/25/2003	Ernst D. Backhaus	U 014739-9	3719

7590

05/09/2005

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EXAMINER

ZIMMERMAN, JOHN J

ART UNIT PAPER NUMBER

1775

DATE MAILED: 05/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/627,042

**Applicant(s)**

BACKHAUS, ERNST D.

**Examiner**

John J. Zimmerman

**Art Unit**

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>20040226, 20030829</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **FIRST OFFICE ACTION**

### ***Preliminary Amendment***

1. The Preliminary Amendment received September 22, 2003 has been entered. Claims 1-12 are pending in this application.

### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

3. The Information Disclosure Statement received February 26, 2004 and the Information Disclosure Statement received August 29, 2003 have been considered. Initialed forms PTO-1449 are enclosed with this First Office Action.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. The term "cold-plating" (e.g. independent claim 1, line 5) has no universally recognized definition in the art. It is unclear what does (or does not) constitute "cold-plating" (e.g. does this term apply to electroplating, electroless plating, pressure laminating, adhesive cladding, explosion bonding, etc. . . ? ).

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-5, 7 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Popplewell (U.S. Patent 3,861,884).

9. Popplewell discloses roll bonding nickel or steel applied to a copper core (e.g. see Examples I and II). The applied layers are of comparatively a high surface hardness material and the core is of comparatively high thermal conductivity material. Regarding the recitation of "cold-plating" and "coating" in the claims, when there is a substantially similar product, as in the

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applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q. 685, and *In re Fessmann*, 180 U.S.P.Q. 324. A "coating" is simply defined as one layer of a substance covering another. Regarding the recitation of "a separator plate for the production of printed circuit board components", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). In this case, the clad composite of the prior art would certainly be capable of fulfilling the function of a separator plate even though it may not be intended for such a use by the reference. The prior art clad composite has all the physical structure required by the article recited in the rejected claims and therefore anticipates the claimed product. In addition, the recitation of a "separator plate" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

10. Claims 1-4, 6-7 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Ulam (U.S. Patent 4,103,076) or Ulam (U.S. Patent 4,167,606).

11. Ulam '076 discloses roll bonding stainless steel applied to a copper and/or aluminum core (e.g. see column 2, lines 60-69). Ulam '606 disclose the same (e.g. see the table spanning columns 2 and 3), but further coats the core (e.g. see claims 1-4 of Ulam '606). The applied layers are of comparatively a high surface hardness material and the core is of comparatively high thermal conductivity material. Regarding the recitation of "cold-plating" and "coating" in the claims, when there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q. 685, and *In re Fessmann*, 180 U.S.P.Q. 324. A "coating" is simply defined as one layer of a substance covering another. Regarding the recitation of "a separator plate for the production of printed circuit board components", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). In this case, the clad composite of the prior art would certainly be capable of fulfilling the function of a separator plate even though it may not be intended for such a use by the reference. The prior art clad composite has all the physical structure required by the article recited in the rejected claims and therefore anticipates the claimed product. In addition, the recitation of a "separator plate" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the intended use of a

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structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

12. Claims 1-4, 6, 8 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishii (Japanese publication 04-319431).

13. Ishii discloses roll bonding (e.g. see Figure 2) steel cladding applied to an aluminum core having an adhesive coating (e.g. see abstract and Figure 1). The thicknesses of the aluminum and steel layers are given in the table in paragraph [0016] with examples of the core layer thickness of 0.34 mm (e.g. example 8) which is "about 0.35 mm" (e.g. pending claim 8). The applied layers are of comparatively a high surface hardness material and the core is of comparatively high thermal conductivity material. Regarding the recitation of "cold-plating" and "coating" in the claims, when there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q. 685, and *In re Fessmann*, 180 U.S.P.Q. 324. A "coating" is simply defined as one layer of a substance covering another. Regarding the recitation of "a separator plate for the production of printed circuit board components", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is

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capable of performing the intended use, then it meets the claim. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). In this case, the clad composite of the prior art would certainly be capable of fulfilling the function of a separator plate even though it may not be intended for such a use by the reference. The prior art clad composite has all the physical structure required by the article recited in the rejected claims and therefore anticipates the claimed product. In addition, the recitation of a "separator plate" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

### ***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 1-6 and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winter (U.S. Patent 3,462,827) in view of Oleksiak (U.S. Patent 6,060,438) or Malone (U.S. Patent 4,759,486).



16. Winter discloses roll bonding cladding and core materials of dissimilar metals (e.g. see column 3, lines 1-10; column 4, lines 24-43; examples 1-11). Example core materials are aluminum core alloys and claddings of steel and nickel. The applied layers are of comparatively a high surface hardness material and the core is of comparatively high thermal conductivity material. Regarding the recitation of "cold-plating" and "coating" in the claims, when there is a substantially similar product, as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show that the same process of making, see *In re Brown*, 173 U.S.P.Q 685, and *In re Fessmann*, 180 U.S.P.Q. 324. A "coating" is simply defined as one layer of a substance covering another. Regarding the recitation of "a separator plate for the production of printed circuit board components", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). In this case, the clad composite of the prior art would certainly be capable of fulfilling the function of a separator plate even though it may not be intended for such a use by the reference. The prior art clad composite has all the physical structure required of a separator plate. In addition, the recitation of a "separator plate" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness

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but, instead, the structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Although Winter may not disclose layers of the specific thicknesses of claims 8 and 9, but Winter clearly discloses that core and cladding materials down to the order of 0.001 inch are within the purview of Winter's invention (e.g. see column 4, lines 48-53). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to manufacture core and cladding layers down to 0.001 inch because Winter discloses that core and claddings down to this lower limit are within the purview of his disclosure. Winter may also not disclose the use of lubricant in his rolling process, but Oleksiak (e.g. see column 1, line 55 - column 2, line 3) discloses that lubricant applied to the work in a rolling process produces consistent metal quality and Malone discloses that lubricant applied during the bond rolling process reduces galling during cladding (e.g. see column 1, line 54 - column 2, line 29). In view of Oleksiak or Malone, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a lubricant for the roll bonded composites of Winter because Oleksiak and Malone clearly show that applying lubricant during roll bonding is known to produce better metal surface quality and reduce galling.

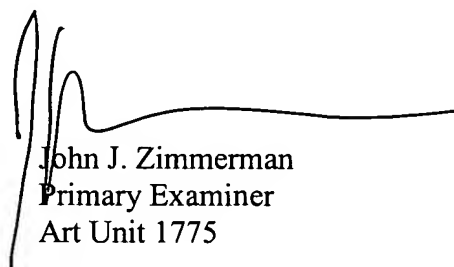
### ***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additionally cited art of record serves to further establish the level of ordinary skill in the art at the time the invention was made.

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18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (571) 272-1547. The examiner can normally be reached on 8:30am-5:00pm, M-F. Supervisor Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John J. Zimmerman  
Primary Examiner  
Art Unit 1775

jjz  
May 2, 2005